ARA 01
Active Receive Antenna
The Active Receive Antenna (ARA01) is a compact emissions antenna with an antenna factor comparable to a conventional wideband passive antenna such as the Bilog™.

The small size makes the ARA 01 particularly suitable for use in anechoic chambers; however it can also be used on an Open Area Test Site (OATS) or at on-site locations.

The ARA 01 features two sets of interchangeable Dipole Antenna Elements (DAE). The standard set (DAE01) is optimized for 200 MHz to 1 GHz, with usable sensitivity down to 30 MHz. For improved sensitivity between 30 MHz to 300 MHz, the optional DAE02 set is available.

### Features
- Stable
  - Repeatable measurements
- Bilog™ equivalent antenna factor
  - See output measurement graphs
- 30 MHz to 1 GHz range
  - Most commonly used EMC measurement range
- Compact and portable
  - Measurements in confined spaces
  - Measurements where equipment must be hand carried
  - Field testing
- Low cost
  - Affordable measurement systems

### Applications
- Radiated emissions measurements in a confined area
- Low cost alternative to passive wideband antenna
- Portable measurement systems

### Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Frequency range</strong></td>
<td>30 MHz to 1 GHz (200 MHz to 1 GHz optimum) using DAE01 antenna elements</td>
</tr>
<tr>
<td></td>
<td>30 MHz to 300 MHz (optimum) using DAE02 antenna elements</td>
</tr>
<tr>
<td><strong>Output connector</strong></td>
<td>50 Ω BNC jack</td>
</tr>
<tr>
<td><strong>Dynamic range</strong></td>
<td>90 dB</td>
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<tr>
<td><strong>1 dB compression</strong></td>
<td>15.4 dBm / 35.5 mW / 1.33 V (in a 50 Ω system)</td>
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<tr>
<td><strong>Antenna factor</strong></td>
<td>See graph below</td>
</tr>
<tr>
<td><strong>Temperature stability</strong></td>
<td>&lt;1 dB, at an ambient temperature of 5 °C to 45 °C</td>
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<tr>
<td><strong>Time stability</strong></td>
<td>Typically &lt;1 dB over a 12 month period</td>
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<tr>
<td><strong>Dimensions</strong></td>
<td>34 mm × 34 mm × 150 mm (168 mm including connector) excluding dipole elements</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>0.39 kg (including battery)</td>
</tr>
<tr>
<td><strong>Power supply</strong></td>
<td>Single 9 V battery (PP3 or equivalent)</td>
</tr>
<tr>
<td><strong>Operating time</strong></td>
<td>6.5 hours typical with alkaline cells</td>
</tr>
<tr>
<td><strong>Indicators</strong></td>
<td>Power on, low battery</td>
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</tbody>
</table>
Manufacturer’s calibrations

**CAL08** \underline{Antenna factor}, 30 MHz to 1 GHz, derived from a calibrated standard.

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### Standard kits

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Parts included</th>
</tr>
</thead>
</table>
| ARA01KIT01  | Standard ARA 01 active receive antenna kit with pair of 200 MHz to 1 GHz antennas | • ARA 01 Active receive antenna  
• 2×DAE01 – 100 mm long antenna elements  
• CAL08 – antenna factors, 30 MHz to 1 GHz  
• Alkaline battery  
• Case |

### Accessories

- **DAE01** 200 MHz to 1 GHz (optimum) set of 100 mm long antenna elements
- **DAE02** 30 MHz to 300 MHz (optimum) set of 270 mm long antenna elements
- **TRA01** Tripod adaptor with ARA 01 mounting bracket

### Active Receive Antenna: ARA 01

**Typical characteristics**
For further information please contact one of our offices, or visit us online

Email: enquiry@yorkemc.co.uk
www.yorkemc.co.uk

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